

SFAR 88/Related Operating Rules Compliance Planning



“FAA Perspective”

Boeing, Operators and
FAA Aircraft Certification and
Flight Standards

September 5, 2002

Presented by: Mario L. Giordano
Michael Zielinski

Compliance Planning -



- SFAR 88 and related rule amendment oversight by the FAA requires coordination and cooperation by FAA personnel (Flight Standards and Aircraft Certification) as well as the T/C Holders, STC Holders and the Operators.
- The fuel system design review and resulting FAA approved maintenance and inspection program transcends traditional FAA practices by involving FAA Aircraft Certification in the approval of maintenance programs.
- All of us **MUST COLLABORATE** to maximize the industry's ability to enhance fuel system safety using this process and to succeed in achieving timely compliance.

Fuel System Safety Compliance Data

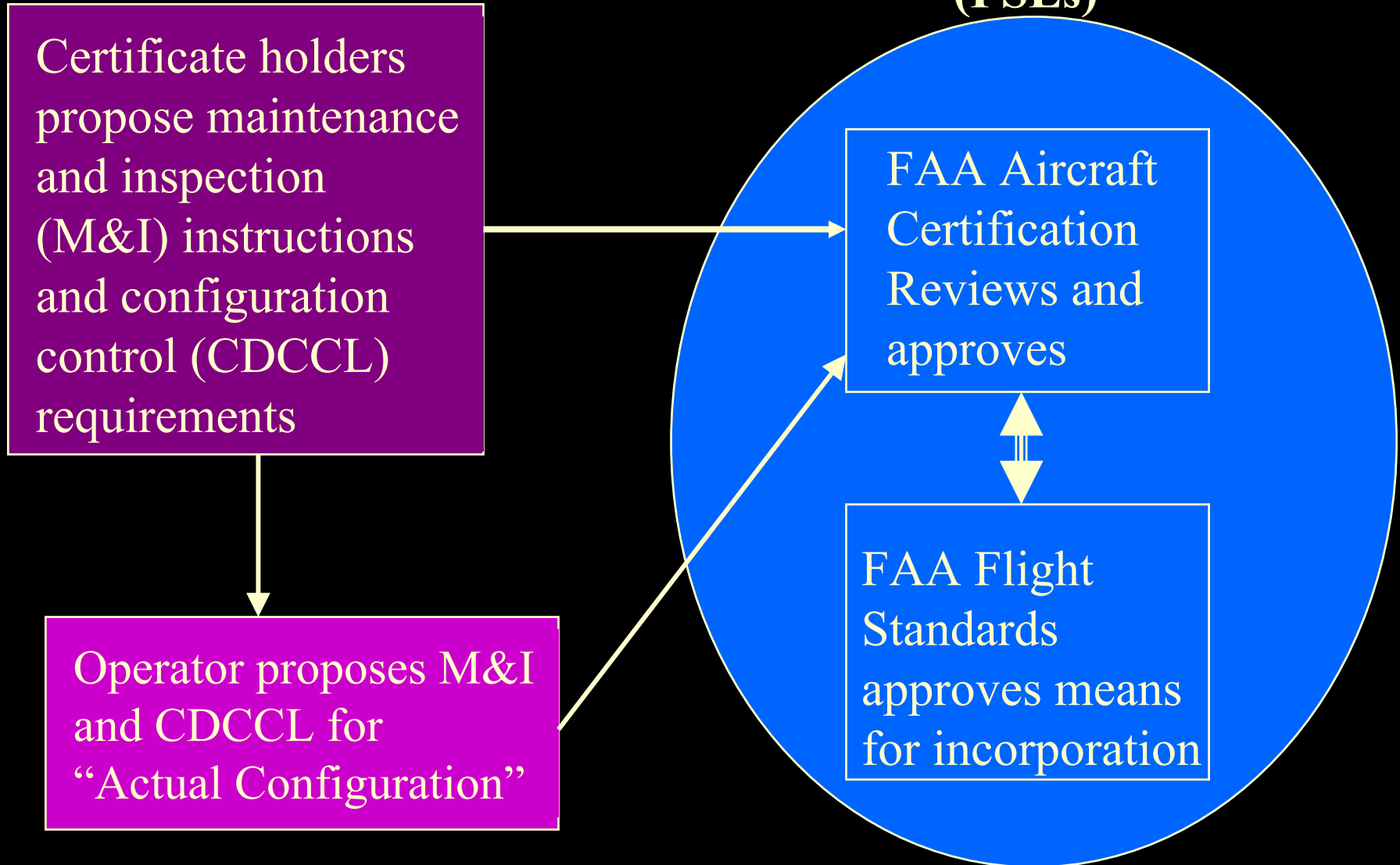
Phase One SFAR Rule Implementation

June 6, 2001
SFAR 88 Rule became
effective. Applicable
TC, STC holders
have compliance date of
December 6, 2002

Phase Two FAR Rule Implementation

June 6, 2001
FAR Parts 25, 91, 121, 125, 129
amended to require instructions for
maint. and inspection of the fuel tank
system be incorporated into the operators
Maint. Program and be FAA approved
by June 7, 2004

Fuel System Limitations (FSLs)



Fuel System Limitations (FSLs)

- Industry established the FSL term for clarity/segregation.
- All FSLs are Airworthiness Limitations Items
 - contains the instructions for maintenance and inspection of the fuel tank SYSTEM, including initial and repetitive inspection frequencies, required instruments, pass/fail criteria, etc. and
 - any applicable critical design configuration control limitations
- Operator's FSLs for a specific aircraft model will include:
 - OEM/STC FSLs (where applicable)
 - Major alteration, field approval, etc. FSLs (where applicable)
- All affected OEM FSLs will be clearly identified and listed in an applicable manufacturer's Maintenance Program Document, such as the Boeing MPD, Section 9.

FSLs - cont'd

- Affected operator's submit FSLs through the Principal Inspectors prior to submittal to FAA Aircraft Certification for review and approval.
- The Operator's Maintenance Program must identify FAA Aircraft Certification approved FSL applicability for EACH specific aircraft contained in the Operator's Aircraft Listing (D085).
- All FAA Aircraft Certification approved FSLs must have operator work instructions (Job Cards, Task Cards) completed and submitted to the Principal Inspectors for review PRIOR to Operations Specifications approval by June 7, 2004.

FSLs - cont'd



- All operators must have tooling/training requirements completed prior to actual accomplishment of FSLs.

Note: In addition to new maintenance and inspection tasks, it is likely that some of the present fuel tank system zonal inspection items using the General Visual Inspection (GVI) technique will become FSLs requiring Detailed Visual Inspections (DVIs). Some DVIs may require a one time fleetwide conformity inspection and/or accelerated inspection frequencies.

Compliance Planning - 18 Months After SFAR 88 Effective Date



December 6, 2002

Cognizant FAA Transport Airplane Directorate's (TADs) and Aircraft Certification Offices (ACOs) are in receipt of all applicable Type Certificate (TC) and Supplemental Type Certificate (STC) Safety Reviews, necessary design changes identified, interim actions, and necessary Maintenance and Inspection Instructions (Instructions for Continued Airworthiness - ICAs).

Compliance Planning - cont'd

December 6, 2002 to June 6, 2003

- **FAA Aircraft Certification/AEG:**

- TAD and ACOs will formally review and approve Safety Review Data
- FAA Aircraft Evaluation Group (AEG) will assist FAA Aircraft Certification in the review process.
 - AEG will review and make recommendations on the maintenance and inspection aspects of the submitted data specifically addressing Airworthiness Limitations Items (ALIs) and Instructions for Continued Airworthiness (ICAs) known as Fuel System Limitations (FSLs).
 - AEG will establish the comparability of the proposed design certificate holders' maintenance and inspection program to the existing instructions.
- FAA Aircraft Certification and the AEG will work jointly to achieve a thorough, objective, and timely data review.
- During the review and approval process, the FAA is committed to open communication with the cognizant T/C, STC Holders.

Compliance Planning - cont'd

Present to June 6, 2003

- **TC/STC Holders:**

- Develop process and procedures for incorporation of FSLs into MPD in the ALI Section
- Develop specific/detailed
 - ICAs
 - Aircraft Maintenance Manuals
 - Task Cards
 - Tooling

Note: Recognize that a potential for required data changes subsequent to FAA June 6, 2003 approval.

Compliance Planning - cont'd

June 7 to Boeing Target November 7, 2003

- **TC/STC Holders:**

- Provide Operators with -

- Incorporated ALIs (FSLs)
 - Completed Aircraft Maintenance Manual Revisions
 - Completed Task Cards
 - Required tooling or commitment to operator to have tooling available when maintenance and inspection process actually begins.

Compliance Planing - cont'd

December 6, 2002 to February 6, 2004

- **Operators:**

- Communicate with TC/STC holders.
- Communicate with Principal Inspectors.
- Conduct aircraft configuration checks.
- Conduct safety reviews of applicable fleet STCs not provided to FAA Aircraft Certification.
- Conduct safety reviews of applicable in-house fleet modifications, field approvals, etc.
- Develop proposed AMM revisions, maintenance and inspection task cards for actual configuration.
- Acquire required tooling.

Compliance Planning - cont'd

December 6, 2002 to February 6, 2004



- **Principal Inspectors:**

- Maintain open communication with the operators during all processes.
- Ensure inspector workforce is adequately trained for a thorough, objective, and timely review of the operators proposed program.
- PIs must plan for the receipt of the operator's report containing the safety review analysis and recommendations for the maintenance program changes (FSL's) for the Aircraft Certification approval, NLT Feb. 6, 2004.

Compliance Planning - cont'd

February 7, 2004 to March 7, 2004

- **Principal Inspectors:**
 - Perform a thorough, objective and timely review of the operator's proposed program.
 - Review FSLs, manuals, and task cards provided by the design certificate holders and developed by operator for its actual configuration.
 - Review substantiation for any deviation from FAA approved design certificate holders' FSLs.
 - Communicate with FAA Aircraft Certification and AEG during the review process if assistance is needed.
 - Forward operator's proposed FSLs to cognizant TAD or ACO, NLT March 7, 2004.

Compliance Planning - cont'd

March 7, 2004 to June 7, 2004

- **FAA Aircraft Certification:**

- Cognizant TAD and ACOs will review and subsequently approve the operators' proposed maintenance and inspection programs.
- FAA AEG will assist in operator's program review, as appropriate.
- Cognizant TAD and ACOs will advise the operator and the Principal Inspectors in writing of FAA Aircraft Certification approval.

Compliance Planning - cont'd

NLT June 7, 2004

- **Principal Inspectors:**

- Upon receipt of FAA Aircraft Certification written approval, and completion of the validation of operator task cards and AMM, the Principal Inspectors will sign the Operator's Operations Specifications.
 - This will acknowledge incorporation of the FAA Aircraft Certification approved Fuel Tank System Maintenance and Inspection Program into the operator's existing Maintenance Program for the aircraft listed in the Ops Specs.